

REMARKS

In the Official Action mailed on **December 23, 2003**, the Examiner reviewed claims 1-21. Claims 1-2, 7-9, 14-15, and 20-21 were rejected under 35 U.S.C. §102(b) as being anticipated by Nakajima (USPN 5,269,012, hereinafter "Nakajima"). Claims 3-6, 10-13, and 16-19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Nakajima in view of Chen et al. (USPub 2003/0120879 A1, hereinafter "Chen").

Rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a)

Dependent claims 2 and 15 were rejected as being anticipated by Nakajima. Applicant respectfully points out that the system of Nakajima is directed to a **synchronous (clock driven) system** (see Nakajima, FIGs. 7 and 8, col. 5, lines 44-46 and col. 2, lines 26-49). Note that pre-increment and post-decrement implies clocked signals.

In contrast, the present invention operates **asynchronously (without a clock signal)** (see page 3, lines 17-18 and page 9, lines 4-9 of the instant application). Note that GasP circuitry is asynchronous and does not use a clock signal. Operating asynchronously is an advantage because it allows data motion between elements of the stack without waiting for a next clock signal and address strobe. Note that in an asynchronous system, data items can ripple through stack cells without having to wait for worst case propagation delays as in a synchronous system. Moreover, it is not obvious to create the rather complicated asynchronous control structures for an asynchronous stack that are illustrated in FIGs. 1-19. There is nothing within Nakajima, either explicit or implicit, which suggests operating asynchronously. In fact, Nakajima expects a synchronous circuit driven by a clock.

Accordingly, Applicant has amended independent claims 1, 9, and 14 to include the limitations of dependent claims 2 and 15. These amendments find

support on page 3, lines 17-18 and on page 9, lines 4-9 of the instant application. Dependent claims 2 and 15 have been canceled without prejudice.

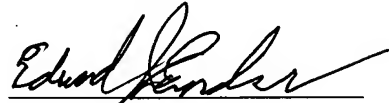
Hence, Applicant respectfully submits that independent claims 1, 9, and 14 as presently amended are in condition for allowance. Applicant also submits that claims 3-8, which depend upon claim 1, claims 10-13, which depend upon claim 9, and claims 16-21, which depend upon claim 14, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

CONCLUSION

It is submitted that the present application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

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